

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"20020151056".pn. and pre-	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/16 06:47
L2	0	"20020151056".pn. and (pre-culture or preculturing or pre-cultured or preculture)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/16 06:48
L3	1	"20020151056".pn. and (dorso-)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/16 06:48

What is claimed is:

1. A method for inducing differentiation of an embryonic stem cell into an ectodermal cell, which comprises culturing the embryonic stem cell under non-aggregation conditions.

2. The method according to claim 1, wherein the ectodermal cell is a cell capable of differentiating into a nervous system cell or an epidermal system cell.

3. A method for inducing differentiation of an embryonic stem cell into an ectoderm-derived cell, which comprises culturing the embryonic stem cell under non-aggregation conditions.

4. The method according to claim 3, wherein the ectoderm-derived cell is a nervous system cell or an epidermal system cell.

5. The method according to claim 4, wherein the epidermal system cell is an epidermal cell.

6. The method according to claim 4, wherein the nervous system cell is a cell selected from the group consisting of the following (a), (b), (c) and (d): (a) a neural stem cell; (b) a nerve cell; (c) a cell of neural tube; and (d) a cell of neural crest.

7. The method according to claim 6, wherein the neural stem cell is a neural stem cell expressing nestin.

8. The method according to claim 6, wherein the nerve cell is a nerve cell selected from the group consisting of the following (a), (b), (c) and (d): (a) a dopaminergic neuron; (b) an acetylcholinergic neuron; (c) a .gamma.-aminobutyrategic neuron; and (d) a serotonergic neuron.

9. The method according to claim 8, wherein the acetylcholinergic neuron is a

motor nerve cell expressing islet 1.

10. The method according to claim 6, wherein the cell of neural tube is a cell

selected from the group consisting of the following (a), (b), (c) and

(d): (a)

(a) cell of neural tube before determination of dorso-ventral axis, which is

capable of differentiating into a cell positioned at the ventral side by

reacting with sonic hedgehog as a ventral factor of neural tube and of

differentiating into a cell positioned at the dorsal side by reacting with bone

morphogenetic protein 4 as a dorsal factor of neural tube; (b) a cell of the

neural tube ventral side, expressing HNF-3.beta. (hepatocyte nuclear factor-3.beta.) positioned on the basal plate of the most ventral side of

neural tube; (c) a cell of the neural tube ventral side, expressing a marker

Nkx2.2 existing secondary to the HNF-3.beta. (hepatocyte nuclear factor-362 )

from the ventral side of neural tube; and (d) a cell of the neural tube dorsal

side, expressing Pax-7.

[0062] (a) a cell of neural tube before determination of dorso-ventral axis,  
which is capable of differentiating into a cell positioned at the ventral side  
by reacting with sonic hedgehog as a ventral factor of neural tube  
and of  
differentiating into a cell positioned at the dorsal side by reacting  
with bone  
morphogenetic protein 4 as a dorsal factor of neural tube;

0195] The cell of neural tube induced from an embryonic stem cell by the method of the present invention includes a cell characterized as a cell of neural tube before the step in which the dorso-ventral axis is determined, which is capable of differentiating into a cell positioned at the ventral side by reacting with sonic hedgehog (hereinafter referred to as "shh") as a ventral factor of neural tube and of differentiating into a cell positioned at the dorsal side by reacting with bone morphogenetic protein 4 (hereinafter referred to as "BMP4") as a dorsal factor of neural tube. Also, a cell of the neural tube ventral side, expressing a marker HNF-3.beta. (hepatocyte nuclear factor-3.beta., hereinafter referred to as "HNF-3.beta.") positioned on the basal plate of the most ventral side of neural tube, a cell of the neural tube ventral side, expressing a marker Nkx2.2 existing secondary to the HNF-3.beta. from the ventral side of neural tube, and a cell of the neural tube dorsal side, expressing Pax-7, all of which are differentiated from the above cell, are also included as neural tube cells induced from an embryonic stem cell by the method of the present invention.

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**PALM INTRANET**

## Continuity Information for 09/855587

### Parent Data

09855587

Claims Priority from Provisional Application 60257049

### Child Data

No Child Data

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## Inventor Information for 09/855587

Inventor Name	City	State/Country
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NISHIKAWA, SHIN-ICHI	KYOTO	JAPAN

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**PALM INTRANET****Inventor Name Search Result**

Your Search was:

Last Name = SASAI

First Name = YOSHIKI

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<a href="#">08343760</a>	<a href="#">5679783</a>	150	11/22/1994	DNA ENCODING A TISSUE DIFFERENTIATION AFFECTING FACTOR	SASAI, YOSHIKI
<a href="#">09855587</a>	Not Issued	71	05/16/2001	Novel differentiation inducing process of embryonic stem cell to ectodermal cell and its use	SASAI, YOSHIKI
<a href="#">10495567</a>	Not Issued	19	05/14/2004	Inducer for Differentiation of Embryo Stem Cells into Ectodermal Cells Method of Obtaining the Same and use Thereof	SASAI, YOSHIKI
<a href="#">60257049</a>	Not Issued	159	12/20/2000	Novel differentiation inducing process of embryonic stem cell to ectodermal cell and its use	SASAI, YOSHIKI

**Inventor Search Completed: No Records to Display.**

**Search Another: Inventor**

<b>Last Name</b>	<b>First Name</b>	
<input type="text" value="SASAI"/>	<input type="text" value="YOSHIKI"/>	<input type="button" value="Search"/>

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## Application Number Information

Application Number: **10/495567**

### Assignments

Filing or 371(c) Date: **05/14/2004**

Effective Date: **05/14/2004**

Application Received: **05/14/2004**

Patent Number:

Issue Date: **00/00/0000**

Date of Abandonment: **00/00/0000**

Attorney Docket Number: **00766.000112**

Status: **19 /APPLICATION UNDERGOING PREEXAM  
PROCESSING**

Confirmation Number: **1465**

Examiner Number: **00000 /**

Group Art Unit: **1645**

Class/Subclass: **435/ .**

Lost Case: **NO**

Interference Number:

Unmatched Petition: **NO**

L&R Code: Secrecy Code:

Third Level Review: **NO**

Secrecy Order: **NO**

Status Date: **05/19/2004**

Oral Hearing: **NO**

Title of Invention: **INDUCER FOR DIFFERENTIATION OF EMBRYO STEM CELLS INTO  
ECTODERMAL CELLS METHOD OF OBTAINING THE SAME AND USE THEREOF**

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
<b>10495567</b>	<b>5630</b>	<b>04/03/2006</b>	<b>No Charge to Location</b>	<b>No Charge to Name</b>	<b>WHITE,RITA</b>	

Appln  
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